

Virginia Stationary Source Operating Permit

Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, chapter 13, ' 10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9 VAC 5-80-50 through 9 VAC 5-80-305 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

<u>Permit Number</u>	<u>Effective Date</u>	<u>Expiration Date</u>
VA-50554	November 14, 2001	November 14, 2006

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	E. I. DuPont de Nemours and Company, Inc.
Mailing Address:	1201 Bellwood Road Richmond, Virginia 23237
Facility Name:	DuPont James River Plant
Facility Location:	1201 Bellwood Road, Chesterfield County, VA

Permit Issued this fourteenth day of November, 2001

Dennis H. Treacy, Director, Department of Environmental Quality

E.I. DuPont de Nemours and Co., Inc. - DuPont James River Plant
Title V Operating Permit
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I. Facility Information

Permittee

E.I. Du Pont de Nemours and Co., Inc.
1201 Bellwood Road
Richmond, Virginia 23237

Facility

Du Pont James River Plant
1201 Bellwood Road
Richmond, Virginia 23237

Responsible Official

Timothy W. Hix
Plant Manager
(804) 383-6074

Contact Person

Frank H. Dreusicke
Environmental Engineer
(804) 383-6072

County-Plant Identification Number: 041-0078

Facility Description: Primary SIC Code Number – 2819
Secondary SIC Code Number - 3275

Primary SIC Code - 2819 (sulfuric acid production process).

The sulfuric acid production process produces primarily 100% sulfuric acid for sale to external customers. Another grade of sulfuric acid produced by the plant, designated PS3, is piped to the DuPont Spruance Plant.

Secondary SIC Code - 3275.

Weak acid from the Spruance Plant is piped back to the James River facility where it is used to manufacture carbon dioxide, and gypsum from aragonite. There are potential fugitive emissions from the storage and transfer of aragonite and gypsum.

II. Emissions Unit Specific Requirements

1. Insignificant Emission Unit Inventory List

Emission Unit No.	Emission Unit Description	Citation (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
I002	Emergency Diesel Generator	5-80-720 C.4.	TSP, PM10, NO _x , SO ₂ , CO, VOC	235 hp
I003	Gasoline Storage Tank	5-80-720 B.2.	VOC	1000 gallons
I004	Roadways & Parking Lots	5-80-720 C.3.	PM-10	
I005	Cold Cleaner	5-80-720 B.2.	VOC	
I006	Product Truck & Rail Loading	5-80-720 B.1.	TSP, sulfuric acid mist	
I007	Unloading Molten Sulfur Pit	5-80-720 B.1.	TSP, hydrogen sulfide	
I008	Process-Feed Molten Sulfur Pit	5-80-720 B.1.	TSP, hydrogen sulfide	
I009	Diesel Storage Tank	5-80-720 B.2.	VOC	1000 gallons
I010	#2 Fuel Oil Storage Tank	5-80-720 B.2.	VOC	6,200 gallons

2. Significant Emissions Unit Inventory List

a. Process Units

Emission Unit No.	Stack No.	Emission Unit Description	Manufacturer and Date of Construction	Size/Rated Capacity
001	S01	Sulfur Burner	Constructed 1947	38.3 MMBTU/hour
002	fugitive	Gypsum Production Process	Constructed 1982	41, 780 lbs/hr
003	S03	Emergency Boiler	Installed 1983	7.9 MMBTU/hour

3. Emission Unit Limitations - N/A

4. Emission Unit Specific Permit Terms

- A. Sulfuric Acid Production Process (001): Emissions from the sulfuric acid production shall not exceed the limits specified below:

Table II.4.A.1 Emission Limitations for emission unit 001				
Regulated Pollutant	Limitation/Standard		Applicable Requirement(s)	Reference Method
	lb/hr	tons/yr		
SO ₂	2000 ppm and 27 lbs SO ₂ /ton 100% sulfuric acid		9 VAC 5-40-2850 9 VAC 5-50-410	SO ₂ monitor performance evaluations: Method 8
H ₂ SO ₄ mist	0.5 lb/ton 100% sulfuric acid		9 VAC 5-40-2860 9 VAC 5-50-410	Method 8

Monitoring

- (a) Compliance with the sulfur dioxide emission limits shall be demonstrated primarily by using SO₂ process monitor data along with O₂ monitor data as described in 40 CFR §60.84(d). The permittee will keep daily records of the SO₂ emission rate in lb/ton of 100% sulfuric acid produced for each 3-hour block of time.
- (b) When the monitors are not operating due to a malfunction , compliance will be demonstrated by the following alternate methods:
- (i) Reich test , as described in 40 CFR §60.84(b); or
 - (ii) Reich test and oxygen monitor data.
- In the event that an alternative method is used, the permittee will keep daily records of SO₂ emission rate in lbs/ton of 100% sulfuric acid produced at a minimum of three times daily.
(9 VAC 5-80-110 of State Regulations)
- (c) Compliance with the sulfuric acid (H₂SO₄) mist emission limits shall be based on stack tests conducted in accordance with Method 8 during the first and the last 12-month period that this permit is in effect.
(9 VAC 5-80-110)

- (d) Compliance with the visible emissions standard contained in Part III of this permit shall be determined by opacity evaluations performed in accordance with 40 CFR 60, Appendix A, Method 9. Daily observations of each emission unit shall be performed by operating personnel familiar with Method 9 procedures, and any observations recorded. In addition, monthly observations in accordance with Method 9 shall be performed and recorded by a certified observer.
(9 VAC 5-80-110)

Reporting

- (e) The facility will submit a Risk Management Plan by June 20, 1999, in accordance with 40 CFR Part 68 Subpart G, §§ 68.150 through 68.185. The Risk Management Plan shall be updated as specified in 40 CFR Part 68 Subpart G, §§ 68.190(a) through 68.190(c).
(40 CFR Part 68 - Chemical Accident Prevention Provisions)

Recordkeeping

- (f) The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, Piedmont Region. These records shall include, but are not limited to
- (i) Emissions data for sulfuric acid and sulfuric acid mist to verify compliance with the hourly and annual emissions limitations in Table 11.4.A.1.
 - (ii) Results of all stack tests, visible emission evaluations and performance evaluation;
 - (iii) Production of sulfuric acid, calculated monthly as the sum each consecutive twelve (12) month period; and
 - (iv) Periods of non-performance of all emission monitors.

These records shall be maintained by the source for a period of at least five (5) years.
(9 VAC 5-80-110 F)

B. Gypsum Production Process (002)

Table II.4.A.1 Emission Limitations for emission unit 002				
Regulated Pollutant	Limitation/Standard		Applicable Requirement(s)	Reference Method
	lb/hr	tons/yr		
Particulate Matter			9 VAC 5-50-260	performance evaluations:
Material Storage	0.1	2.6		Method 5
Total	0.6	2.8		
PM10			9 VAC 5-50-260	Method 201
Material Storage	0.1	1.2		
Total	0.3	1.3		

(9 VAC 5-50-260 of State Regulations, Condition 5 of 8/11/99 permit)

1. The yearly production of Gypsum shall not exceed 120,000 tons, calculated monthly as the sum of each consecutive twelve (12) month period.
(9 VAC 5-80-10 H of State Regulations, Condition 4 of 8/11/99 permit)

2. Visible emissions from screening, stockpiles, surge bins, and conveyor transfer points shall not exceed 10 % opacity.
(9 VAC 5-50-260 of State Regulations, Condition 6 of 8/11/99 permit)

Monitoring

- (a) The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, Piedmont Region. These records shall include, but are not limited to, Visible emissions evaluations, yearly throughputs for the following operation; Gypsum Production, calculated monthly as the sum of each consecutive twelve (12) month period.

These records shall be available for inspection by the DEQ and shall be current for the most recent five (5) years.
(9 VAC 5-50-50 of State Regulations, Condition 9 of 8/11/99 permit)

- (b) Visible Emission Evaluations (VEE) in accordance with 40 CFR, Part 60, Appendix A, Method 9, shall be conducted on the following equipment: the conveyors, pugmill and dryer. Each test shall consist of ten (10) sets of twenty-four (24) consecutive observations (at fifteen second intervals) to yield a six (6) minute average. A minor test method change for equipment with zero (0) opacity is a Method 22 in accordance with 40 CFR, Part 60, Appendix A. The details of the tests are to be arranged with Director, Piedmont Regional Office. The evaluation shall be performed within sixty (60) days of achieving maximum operation, but no later than 180 days after initial start up. One (1) copy of the test result shall be submitted to the Director, Piedmont Regional Office within 45 days after test completion and shall conform to the test report format enclosed with this permit. Daily observations of each emission unit shall be performed by operating personnel familiar with Method 9 and 22 procedures, and any observations recorded. In addition, monthly observations in accordance with Method 9 or 22 as appropriate, shall be performed and recorded by a certified observer.

(9 VAC 5-50-30 and 9 VAC 5-80-10 J of State Regulations, Condition 7 of 8/11/99 permit)

Reporting

- (a) The facility will report the anticipated date of the initial visible emission evaluations postmarked at least thirty (30) days prior to such date.
(9 VAC 5-50-50 of State Regulations, Condition 8 of 8/11/99 permit)

III. Facility-Wide and General Requirements

1. Facility Wide Conditions and Permit Terms

A. Existing Source Standard for Visible Emissions

Unless specified otherwise in this part, no owner or other person shall cause or permit to be discharged into the atmosphere from any affected facility any visible emissions which exhibit greater than 20% opacity at all times, except for one six-minute period in any one hour of not more than 60% opacity. Failure to meet the requirements of this section because of the presence of water vapor shall not be a violation of this section. This standard is applicable to the following emission units: 001 - Sulfuric Acid Production Process and 003 - Emergency Boiler.

(9 VAC 5-40-80)

B. Existing Source Standard for Fugitive/Dust Emissions

No owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

1. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
2. Application of asphalt, water or suitable chemicals on dirt roads, material stockpiles and other surfaces which may create airborne dust; the paving of roadways and maintaining them in a clean condition.
3. Installation and use of hoods, fans and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations.
4. Open equipment for conveying or transporting materials likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion.
5. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

This standard is applicable to the following emission units: 001 - Sulfuric Acid Production Process, and 002 - Gypsum Production Process.

(9 VAC 5-40-90)

2. General Permit Conditions

A. Recordkeeping and reporting

1. All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:
 - a. The date, place as defined in the permit, and time of sampling or measurements.
 - b. The date(s) analyses were performed.
 - c. The company or entity that performed the analyses.
 - d. The analytical techniques or methods used.
 - e. The results of such analyses.
 - f. The operating conditions existing at the time of sampling or measurement.
(9 VAC 5-80-110 F.)
2. Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
(9 VAC 5-80-110 F.)
3. All reports submitted as a result of monitoring contained in any applicable requirement must be submitted at a frequency of no less than every six months. All deviations from permit requirements must be clearly identified in any report required by any condition of this permit. For purposes of this permit a deviation means any condition determined by observation, data from any monitoring protocol or any other monitoring which is required by the permit that can be used to determine compliance. Deviations include exceedances documented by continuous emission monitoring or excursions from control performance indicators documented through periodic or compliance assurance monitoring. All monitoring reports submitted as required by this permit must be certified by a responsible official consistent with 9 VAC 5-80-80 G.
(9 VAC 5-80-110 F.)

B. Failure/Malfunction Reporting

If, for any reason, the affected facilities or related air pollution control equipment fails or malfunctions and may cause excess emissions for more than one hour, the owner shall notify the Director, Piedmont Region within four (4) daytime business hours of the occurrence. In addition, the owner shall provide a written statement, within 14 days,

explaining the problem, corrective action taken, and the estimated duration of the breakdown/shut down.
(9 VAC 5-20-180)

C. Permit Deviation Reporting

The permittee shall report by the next business day any deviations from permit requirements or any excess emissions, including those attributable to upset conditions as defined in this permit, the probable cause of such deviations, and any corrective actions or preventive measures taken.
(9 VAC 5-80-110 F.2.)

D. Severability

The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.
(9 VAC 5-80-110 G.1.)

E. Duty to Comply

The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
(9 VAC 5-80-110 G.2.)

F. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
(9 VAC 5-80-110 G.3.)

G. Permit Action for Cause

This permit may be modified, revoked, reopened, and reissued, or terminated for cause as specified in 9 VAC 5-80-110 L, 9 VAC 5-80-240 and 9 VAC 5-80-260. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
(9 VAC 5-80-110 G.4.)

H. Property Rights

The permit does not convey any property rights of any sort, or any exclusive privilege.
(9 VAC 5-80-110 G.5.)

I. Duty to Submit Information

1. The permittee shall furnish to the board, within a reasonable time, any information that the board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the board along with a claim of confidentiality.
(9 VAC 5-80-110 G.6.)
2. Any document (including reports) required in a permit condition to be submitted to the board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-80 G.
(9 VAC 5-80-110 K.1)

J. Duty to Supplement or Correct Application

Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.
(9 VAC 5-80-80 E.)

K. Duty to Pay Permit Fees

The owner of any source for which a permit under 9 VAC 5-80-50 through 9 VAC 5-80-305 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-355 (Rule 8-6 of the Regulations).
(9 VAC 5-80-110 H.)

L. Changes to Permits for Emissions Trading

No permit revision shall be required, under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.
(9 VAC 5-80-110 I.)

M. Inspection and entry requirements

The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

- C Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.
- C Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.
- C Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.
- C Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. (9 VAC 5-80-110 K.2.)

N. Annual Compliance Certification

Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ within 60 days of the end of each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices. The compliance certification shall comply with such additional requirements that may be specified pursuant to § 114(a)(3) and § 504(b) of the Clean Air Act. This certification shall be signed by a responsible official and shall include:

- C a description of the means for assessing or monitoring the compliance of the source with its emissions limitations, standards, and work practices.
- C The identification of each term or condition of the permit that is the basis of the certification.
- C The compliance status.
- C Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.
- C Consistent with subsection 9 VAC 5-80-110 E., the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period.
- C Such other facts as the permit may require to determine the compliance status of the source.
- C Such other facts as the permit may require to determine the compliance status of the source.
(9 VAC 5-80-110 K.5.)

O. Reopening For Cause

1. The permit shall be reopened by the board if additional federal requirements become applicable to a major source with a remaining permit term of three or more years. Such a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-80 F.
(9 VAC 5-80-110 L)
2. The permit shall be reopened if the board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
(9 VAC 5-80-110 L)
3. The permit shall be reopened if the administrator or the board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
(9 VAC 5-80-110 L)
4. The permit shall not be reopened by the board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-110 D. of the State Air Pollution Control Board's Regulations for the Control and Abatement of Air Pollution.
(9 VAC 5-80-110 L)

P. Permit Availability

Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.
(9 VAC 5-80-150 E.)

Q. Transfer of Permits

1. No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.
(9 VAC 5-80-160)
2. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the

board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-200.

(9 VAC 5-80-160)

3. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-200.

(9 VAC 5-80-160)

R. Permit Expiration

Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 9 VAC 5-80-80.

(9 VAC 5-80-170 B)

S. Malfunction as an Affirmative Defense

A malfunction constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations. The affirmative defense of malfunction shall be demonstrated by the permittee through properly signed, contemporaneous operating logs, or other relevant evidence that show the following:

- C A malfunction occurred and the permittee can identify the cause or causes of the malfunction.
- C The permitted facility was at the time being properly operated.
- C During the period of the malfunction the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.
- C For malfunctions that occurred for one hour or more, the permittee submitted to the board by the deadlines described in **Condition B. Malfunction/Failure Reporting** above, a notice and written statement containing a description of the malfunction, any steps taken to mitigate emissions, and corrective actions taken. The notice fulfills the requirement of 9 VAC 5-80-110 F 2 b to report promptly deviations from permit requirements.

In any enforcement proceeding, the permittee seeking to establish the occurrence of a malfunction shall have the burden of proof. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any requirement applicable to the source.

(9 VAC 5-80-250)

T. Permit Revocation or Termination for Cause

A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of

the permit, any applicable requirements, or the applicable provisions of this rule. The board may suspend, under such conditions and for such period of time as the board may prescribe, any permit for any of the grounds for revocation or termination or for any other violations of these regulations.
(9 VAC 5-80-260)

3. Permit Shield

Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit. Nothing in this permit shield shall alter the provisions of § 303 of the Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by the (i) administrator pursuant to § 114 of the Clean Air Act, (ii) the Board pursuant to § 10.1-1314 or § 10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to § 10.1-1307.3 of the Virginia Air Pollution Control Law.
(9 VAC 5-80-140)